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Number Six

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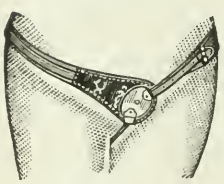

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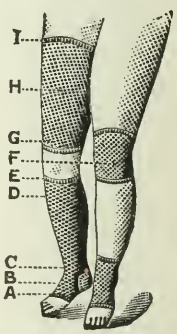

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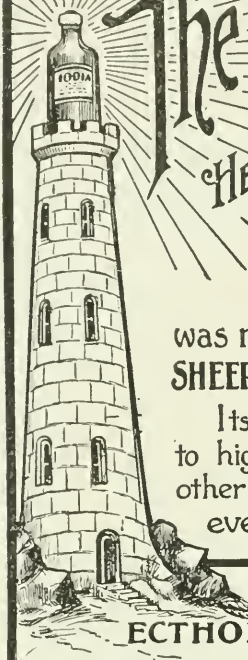

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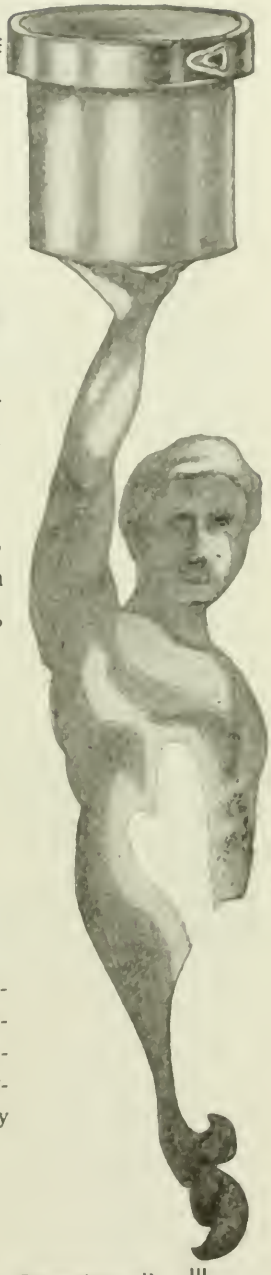

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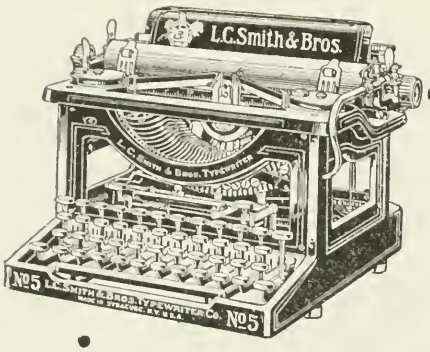

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AMPUTATION OF THE RECTUM, MADE NECESSARY BY CONDITIONS AT TIME OF OPERATION.*

By J. Dawson Reeder, M.D.
Baltimore, Md.

One of the most satisfactory results that I have obtained in operations upon the rectum is that of amputation in the cases here reported, where there seemed to be no alternative for me at time of operation, and knowing full well that this procedure makes me liable to severe criticism by proctologic surgeons who, as a rule, condemn this seeming more or less hazardous operation, when we consider the possibilities of permanent incontinence which one would naturally expect to occur. The cases herein reported were, with one exception, taken to the operating-room with some special operation in view; but after patients were anesthetised and a complete and thorough examination was made, there seemed no other course to follow than that of complete amputation, which was the application of my experience while working with the late Dr. Tuttle.

The technique was similar (except a few details) in each case, and after consultation at the table with the physician who had turned the case over to me was as follows: A circular incision was made, at or near the muco-cutaneous border, dissecting the anus free from the tissue adjacent; traction was then made upon the lower extremity of the bowel by the application of T forceps and the muscle (sphincter) is put upon the stretch, an attempt to loosen its attachments by blunt dissection generally results in a peeling back of the layer of fibers next to the anal margin, which in the cases here reported was partially accomplished by the condition present at time of operation calling for amputation. After

*Read at annual meeting of the Medical and Chirurgical Faculty, April 30, 1914.

the muscle is freed as much as possible, small retractors are introduced and it is held on each side by assistants and traction is again exerted upon the free end of the bowel, while it is dissected free to the bulging of the peritoneal pouch, which, in one case, was opened and closed by suturing to new bowel surface after sufficient gut had been drawn down to accomplish the desired end in the case.

The lower extremity of bowel after amputating sufficient amount is sutured to the cutaneous margin after the muscle is placed in as nearly a normal position as possible. My results in the cases here reported have been so entirely satisfactory to both patient and myself, so far as prompt healing and good sphincter control is concerned, regardless of the fact that should they live long enough they may each be the victims of anal stricture, I feel justified in reporting my results, as each of these patients were more or less invalids for periods of 5 to 15 years.

While I have always been antagonistic to the Whitehead operation for hemorrhoids because of the scar tissue produced, and feel that it is only justified in a very few selected cases, I realize fully that the operations here reported leave practically the same amount of scar tissue which may be the future seat of contraction and irritation, producing either stricture or malignancy.

Case No. 1.—W. J. K., age 61 years; white male; date, May 4, 1912. Referred by Dr. H. D. McCarty.

Family History: Negative.

Past History: About 30 years ago had first attack of prolapse, and was confined to bed for several days; since that time he has suffered with piles, which would "come down" on him without any warning, but was always able to reduce them in a short while with warm water and vaseline.

Present History: May 4 hemorrhoids prolapsed while at stool about 6 A. M., tried frequently during the day to reduce them, but could not, as the mass was getting larger and harder every hour. Patient suffered greatly until late in the afternoon, when all sensation disappeared, and about 7 P. M. sent for Dr. McCarty.

A short while later I was called, and after an examination had him removed to University Hospital. Patient was placed upon the table at 9 P. M. under ether. Examination showed a prolapsed strangulated rectum, mass larger than two fists, impossible to reduce, as there were several gangrenous areas; mass was hard and covered with mucus and blood. Four large hemorrhoids seen imbedded in the large mass, which were ulcerated and bleeding freely.

Operation: An incision through the median line extending from the anterior to posterior commissure was made, and each lateral half was amputated with curved scissors, leaving a wide raw surface bleeding very freely from numerous thrombosed vessels, which stood out as though injected with wax.

Vessels of each side were picked up and ligated, and free margin of bowel was then sutured to skin surface with interrupted

sutures at about half-inch intervals, as I anticipated slough and infection would follow. Each lateral half was about the size of a large kidney, dark blue in color, and vessels could be felt throughout the entire structure filled with clotted blood, which gave the feeling of vessels in a subject on the dissecting table injected with the heavy wax. Patient was returned to bed in very good condition and was awake in about two hours; complained of no pain whatever, and received no further treatment except dressing upon the third day, followed by Comp. licorice powder every four hours until effectual.

Bowels moved the following day without either pain or the passage of blood, and patient was allowed to get up; wound healed without sloughing and patient was discharged from the hospital on the tenth day.

One year later the patient came to my office by request, and examination and history showed perfect sphincter control, and he has not suffered a single day since leaving the hospital.

Diagnosis: Strangulated prolapsed rectum.

Result: Cured.

Case No. 2.—XX white woman, age 62 years. Referred by Dr. Ashby, University Hospital, Ward K. Diagnosis: Complete prolapse of rectum and cystocele.

Family History: Negative.

Past History: Has had prolapse of rectum for past ten years, following an attack of internal ulcerated hemorrhoids, which were treated by injection method some eight years previously. About time of rectum dropping out, patient noticed a large bulging mass upon straining at stool protruding from the vagina, and had much difficulty in urinating at times. Condition would come on frequently and disappear without any special treatment, except keeping quiet for a few days.

Present History: Patient entered the University Hospital for treatment in the Gynecological Department for cystocele and prolapse of the rectum, which she had been unable to reduce for several weeks. Examination by request of Dr. Ashby revealed a large mass of protruding oedematous rectum, which was bathed in mucous and measured about six inches in length. Cystocele was not visible at this time, as vagina was packed with gauze. Operation was advised, and it was agreed that I should operate at the same time that Dr. Ashby attempted to correct the cystocele.

Operation: Patient taken to the operating-room and anesthetised with ether. Upon examination with parts perfectly relaxed, a large mass was seen to protrude from the vagina, dropping down upon the prolapsed rectum; this was replaced and held by a vaginal packing, and patient turned over to me for first step in the combined operation. Incision was made around the cutaneous margin as above described, and after freeing this portion of prolapse from adjacent structures the sphincter ani was searched for and found to be dilated by the offending mass to such an extent that it was not dissected loose at any point. Im-

mediately there was a dropping of a large mass of invaginated bowel, and peritoneal pouch was bulging through the opening as though the entire pelvic floor had given away, and the amount of prolapse now measured at least seven inches. Peritoneum was then opened and traction made upon the exposed portion of rectum, after the anal end was tied to prevent leakage, until the bowel seemed on the stretch. The peritoneal opening was now closed with catgut sutures around the portion of bowel adjacent, and protruding mass cut off a little flush with the cutaneous margin. This free area after being cleaned was sutured to the skin by interrupted chromocised catgut, and patient returned to bed, Dr. Ashby having decided to postpone his operation to a future date.

Following day gauze plug was removed from the vagina, and on the fourth day bowels were moved by compound licorice powder without any pain; wound healed by first intention, and by end of tenth day she was discharged as far as my duties were concerned. I was told by the Resident that there had not been a sign of the cystocele since the rectal operation, and am under the impression that she was dicharged from the hospital without any further treatment.

During the convalescence the temperature was never above 99.3, and after first bowel movement on the fourth day she had a daily evacuation, followed by an irrigation of boric acid.

Result: Cured.

Case No. 3.—W. P. H. Referred by Dr. Shannon, July 28, 1913. City.

Family History: Mother died age 65, apoplexy; father died age 68, brain trouble; brother died age 12, cerebro-spinal meningitis; brother died age 46, T. B. general infection; five brothers living and healthy; one sister living and healthy.

Past History: Negative, except 25 years ago was operated upon for hemorrhoids.

Present Trouble: For past five years has suffered continually from prolapsing internal hemorrhoids, and the past two weeks has had prolapse and severe straining, which would take from one to five hours to reduce. Never has a bowel movement oftener than twice in a week for fear of the prolapse and bleeding, which completely unfits him for the remainder of that day.

Examination: Shows complete circle of internal thrombotic hemorrhoids now ulcerated and rectum bathed in pus and mucus.

Treatment: Rectal irrigations for a month; removal advised.

Operation: September 27, 1913, 8.30 A. M., University Hospital. Dr. Reeder, Dr. Edwards, assistant.

After dilating sphincter entire hemorrhoidal area prolapsed, showing ulceration and general breaking down of mucous membrane. Muco-cutaneous border showed a large amount of angiomatous tissue similar to patient's lower lip, which shows a macrocheilia of long standing. Changed from a clamp and cautery

operation to a complete amputation. The tissue after being removed showed a large area bleeding freely and broken down.

Lower end of bowel was very fragile, and tore off frequently when traction was made in suturing it to skin margin. Sutured with catgut and dressed with iodoform plug.

Patient was returned to bed in good condition, awake in about three hours. Bowels moved on the sixth day without the slightest pain or bleeding after the dose of compound licorice powder, followed by warm sweet oil injection per rectum at time of desire to have bowel movement.

Recovery uneventful, and patient dismissed from the hospital on ninth day, to report at office every other day.

Two weeks after leaving the hospital entire area of ulceration completely healed, and he was discharged.

Diagnosis: Prolapsed ulcerated internal hemorrhoids, Lymph-Angioma.

Case No. 4.—C. A. R., age 34 years; occupation, brickyard superintendent. City. Date, February 9, 1914. Referred by Dr. Coleman.

Family History: Negative.

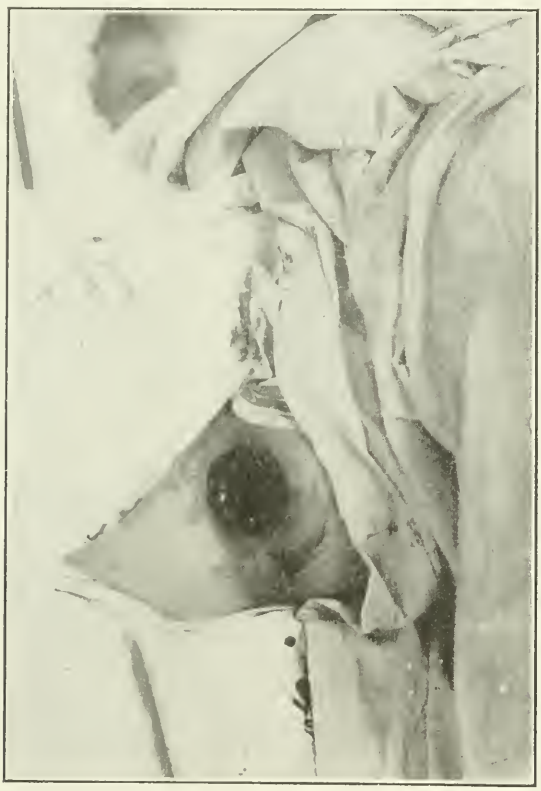
Past History: Negative, except for past 10 years he has suffered almost continuously from prolapsing internal hemorrhoids, which, when prolapsed, completely incapacitated him for work, and was compelled to lose several hours after each bowel movement in trying to replace the prolapsing mass. Bowels only allowed to move about twice a week on account of the bleeding and pain from his hemorrhoids.

Present Trouble: Patient presented himself at the University Hospital, very much prostrated and weakened from a prolonged attack of prolapsed bleeding hemorrhoids, which he had been unable to keep up for some days.

February 11, 1914: Patient taken to the operating-room at 12 o'clock, anesthetised with ether, and prepared for hemorrhoidectomy. Upon examination under anesthetic, the entire hemorrhoidal area was one large thrombotic mass, prolapsing for about two or three inches; the vessels were so thrombosed that they felt like thick fibrous bands radiating through the mass, and some evidences of beginning gangrenous degeneration was present and also suggestive of possible malignancy. After the photograph shown on page 138 was taken, it was decided to amputate the mass, and the above-mentioned procedure was repeated in this case as in the others here reported. Patient was discharged from the hospital on February 27, 1914, and directed to report at the office for a few dilatations with Wales bougies to prevent any possible tendency to primary contraction or stricture.

March 12, 1914: One month from date of operation patient was dicharged as cured, and has a perfect sphincter, no pain, bowels moving every day, and thinks that he has gained a few pounds in weight.

Case No. 5.—April 24, 1914: Called to the University Hospital to do a hemorrhoidectomy on a colored man who had presented himself to the dispensary the day before for bleeding from the rectum. Patient had had a very severe hemorrhage during the early morning, and said he had frequently lost a pint of blood at such periods. Dr. Edwards began to prepare patient, and while cleaning him up was surprised to find it possible to insert his entire fist into the rectal ampulla without stretching the sphincter. Having decided to remove a portion of the redundent mucous membrane, I had just started to dissect the muco-cutaneous



border, when the patient coughed, and there was prolapsed a mass of bloody oedematous bowel larger than one's head. We decided upon immediate amputation, and after the mass was removed were greeted with the knowledge that we were in the peritoneal cavity, and that the protruding stump of free gut was a portion of the colon above the sigmoid, as it was covered with appendices epiploicæ, which were literally hanging out. Peritoneal cavity was closed by catgut sutures around this portion of the colon, epiploical appendices were ligated and removed from this cuff of

bowel, which was then sutured to the skin. Patient so far has had an uneventful recovery, and the drains were removed from the peritoneal cavity on April 27; no pain, no temperature. Licorice powder was administered on the fourth day, and bowels moved twice April 30, which relieves the fear of obstruction. Upon investigating this case after operation I find that we had an intussusception of rectum and sigmoid, which had prolapsed, and that we have amputated not less than 14 or 15 inches of bowel. I base this calculation on the fact that the mass prolapsed was at least seven inches and invaginated.

Preparation of the Patient: The preparation should be similar in every respect to that used in preparing for perineal extirpation of rectum in cancer. If possible the patient should be in the hospital a few days before and the bowels thoroughly cleansed by purgation and daily rectal irrigations followed by injection into the rectal ampulla of a 25 per cent. solution of hydrogen peroxide. The diet should be restricted and of such character as will leave the least possible amount of debris.

On the morning of the operation a high enema should be given, and as soon as effectual it is well to inject into the rectal cavity 3 or 4 ounces of a 50 per cent. solution of hydrogen peroxide, which, if not expelled with the gas that follows its administration, should be washed out on the table at time of preparation for operation. After making primary incision and freeing lower end of bowel, I generally insert a small plug of gauze above field of operation, which materially assists in preventing leakage over field while at work, and the possibility of infection may be further reduced by touching the cut surface with pure carbolic acid, followed by pure alcohol before puncturing the mucosa with the needle in applying sutures to bring skin and mucous membrance in apposition.

The gauze plug is then removed and area should be free of all bleeding. The dressings consist of a few pads of gauze held in position by a well-fitting T bandage, and if it is desired to introduce a drain or plug, I personally prefer a Lynch tube, which serves several very good offices.

It is my preference, in as much as it keeps the sphincter dilated equally on all sides, the enlarged head exerts pressure at the desired point to prevent oozing, makes the patient more comfortable, in that they can expel gas, and lastly it gives perfect assurance against the possibility of hemorrhage being in any way concealed.

I do not think that there is any class of surgical cases who have a more constant fear of pain than the rectal patient, and I have yet to see one where, after proper administration of purgatives, followed by injection of 6 to 8 ounces of warm sweet oil at time of bowel movement, there has been any pain, and the patients are

always agreeably surprised and more than pleased. After bowels have moved once we endeavor to have a daily evacuation, and direct that the lower rectum be washed out after each stool with warm boric acid solution. The only complication that may be referred to at this time is the retention of urine; and I think it well to wait just a "little longer" than reasonable time before catheterizing, as it has been my experience on several occasions that the patient has voluntarily voided just as we were getting ready to catheterize.

While the above preparation is the one desired, it was not followed in the cases here presented, as this operation was not our intention beforehand.

If the patient is discharged from the hospital at the end of ten days, he should be directed to visit his physician every other day for at least a week, as the mucous surfaces will not be entirely healed and any small ulceration present may be touched up with a solution of silver nitrate. I also deem it wise to insert the finger into the anus upon these visits, as it keeps the sphincter dilated a little longer, and you may in this way prevent future stricture formation.

304 Professional Building, Baltimore, Md.

PRACTICAL SANITATION. A Handbook for Health Officers and Practitioners of Medicine. By Fletcher Gardner, M.D., Captain Medical Corps, Indiana National Guard; First Lieutenant Medical Reserve Corps, United States Army; Health Commissioner of Monroe County, Indiana, and James Persons Simonds, B.A., M.D., Professor of Preventive Medicine and Bacteriology, Medical Department, University of Texas; lately Superintendent, Indiana State Laboratory of Hygiene. Illustrated. St. Louis: C. V. Mosby Company. 1914. Cloth, $4 net.

Medicine is ever more and more turning to prevention rather than cure. Everybody realizes that from an economic standpoint this means a great saving to the community. In sanitation, as elsewhere in medicine, rapid strides have been made during the past few years. These changes have practically amounted to a revolution in our ideas concerning the subject. It is with these modern ideas as well as disease-preventing appliances that the above-mentioned book deals. Here in succinct form can be obtained at first hand the latest thought in matters sanitary. The sections on quarantine, schools, extermination of rats, flies, mosquitoes, bedbugs and other disease-carrying vermin are especially instructive and valuable. The book should prove especially serviceable to hygienists and sanitarians, as here, so far as we are aware, for the first time is this subject fully and comprehensively considered under one cover.

THE PRESENT STATUS OF RADIOACTIVE THERAPY IN MEDICINE.

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(Continued from May Number.)

Influence Upon the Cardiovascular System.

Radioactive substances, especially thorium (Th. Maass,[147] Plesch,[12] Tsiurdis,[81 241]), in small doses stimulate the heart muscle, lessen the residual blood and even cause bradycardia. In larger doses (21,800 M. U.) the heart contractions improve in quality and are less frequent. Radioactivity has therefore been successfully used in the form of natural emanation baths and in form of the gas emanation from Franzensbad in cases of myocarditis and heart neuroses (Kemen,[148] Glaessgen,[28] Neunadovics,[39] v. Noorden and Falta[189]). Also thorium X was therapeutically employed in cases of angina pectoris, cardiac dyspnea (Plesch,[12] Gudzent[60]).

The fall of blood pressure after emanation treatment was one of the earliest therapeutic observations made. Experiments (Loewy[121]) with inhaled emanation have confirmed these facts and demonstrated the extensive effect of emanation upon the vasomotor system and the blood pressure. The injection of radioactive substances seems to be more effectual. The pulse amplitude becomes increased, frequently due to the diminution of the diastolic pressure (Loewy,[121 232] Engelmann[128]). Clinically, it cannot be denied that during and after the application with weak, medium and strong doses of radioemanation a change or decrease can be, but is not always (v. Noorden[69]), observed (Benczur,[77] Armstrong,[50] Falta,[38] Glaessgen,[28] etc.). Thorium X given in the form of strong hypodermic injections causes a decided fall in blood pressure (Gudzent,[60 90 211] Plesch,[12] Benczur,[212] Tsiwidis[241]). At the same time, headache, vertigo and other symptoms of cerebral congestion diminish; in fact, all symptoms associated with high blood pressure. For an explanation of these effects it is well to remember certain anatomical findings met with in thorium poisoning, important changes in the entire chromophil system (v. Salle and v. Domarus[215 219]). The paralyzing action upon the suprarenal glands and the decomposition of adrenalin would explain the fact that individuals with marked symptoms of irritation of the vasomotor nerves (vagotonia) tolerate very badly any form of radioactive treatment. In the appreciation of these effects with radioactive solutions in cases of arteriosclerosis we have not

to forget that also other factors, dietetic and climatological, the absence from psychic influences may also contribute to the result.

In cases of chronic parenchymatous nephritis, in uremia, favorable results are recorded by radioactive treatment (Goin,[149] Fuerstenberg,[150] Armstrong,[50] Benczur[212]).

Other Effects Observed (for which no conclusive explanation can yet be given, as in rheumatism and arthritis of non-gouty origin).

A number of patients who frequented the emanatories did not suffer from gout, as previously suspected, but from subacute or chronic arthritis, frequently from arthrosis deformans (not an inflammatory process, but due to perverted internal secretion, which condition later is followed by trophic and degenerative changes in the joints). Later this condition becomes complicated by secondary inflammation, *i. e.*, arthritis (van Noorden[69]). This error of diagnosis is frequently met with, and the patients subjected to rigorous dietary, which weakens the patient and means a disadvantage to his condition. Gouty joints are infrequent, whilst other joint diseases are the more frequent, particularly arthrosis deformans. It seems that many, though not all, of these rheumatic patients were greatly benefited by the radioactive treatment, so that the pains were either greatly relieved or disappeared, the hydrops diminished and even motility was restored (His,[4] v. Noorden[69]). As a rule, the treatment is followed by an increased inflammatory reaction, which is considered a favorable sign (perhaps this action is a consequence of the leucocytosis, the local hyperemia, which follows the application of radioactivity). Radioactive treatment has been given in all forms—inhalation, drinking, injections of radioactive solutions (radiogen, thorium X). Small doses of emanation (4-8 M. U. per liter air) were not so good as stronger doses (25 M. U. per liter). The results are striking with doses from 200-500 M. U. Without special selection of the cases, in subchronic and chronic forms of arthritis, of non-gouty origin, gonococcic, also in rheumatism, the results were very encouraging, even in some forms of acute rheumatism, where the residues (pains and swellings) were still present (Hovorka and Kronfeld,[256] Neusser,[251] Gottlieb,[250] v. Noorden and Falta,[189] Strasser,[158] Armstrong,[50] Strassburger,[59] Jansen,[135] Bernheim,[110] Falta and Freund,[36 207] Loewenthal,[67 244] Nagelschmidt,[86] Fuerstenberg,[47] Davidsohn,[61] Marckwald,[139 151] Kemen,[22] Aschoff,[152] Gudzent,[3 34 60 90 211 218] Glaessgen,[28] Scholz,[27] Benczur,[57 212] Minkowski,[79] Plesch,[12] Burnham,[163] Lowe,[164] Goldberg,[166] Mannes and Wellmann,[167] Kable,[179] E. Fraenkel,[213] Georges,[216] Prich,[226] Bickel,[229] Laqueur,[258] Rowntree and Baetjer[263]). But every case should be tried individually. Either indifferent springs, hot salt baths, fango treatment or Turkish baths may still be the best way in a given instance. Personal experience and the personal therapeutic instinct of the physician may be a better guide than all the book learning.

Myalgias and Neuralgias.

With regard to this great category of human suffering, the objection can be made that the treatment by neurologists, hydrotherapists and masseurs has been too much concentrated in treating a symptom instead of the cause. Usually one finds it stated in the textbooks that these painful manifestations are the expression of a faulty metabolism, particularly due to intoxication of one sort or another. The causal treatment of these neuralgias and myalgias offers more hope for success. Therefore, instead of the different regimes, named after their authors, a careful study of the cause should be encouraged. These etiological factors prove that the neuralgias and myalgias which arise as a consequence of different infections—toxins, colds, etc.—should not be overlooked. The whole arsenal of antirheumatics is powerless against the different etiological factors; consequently, physical treatment should not be forgotten. Radiotherapy, as a new and bright sister in the ring of its older mates, the hydrobalneotherapy, means a valuable contribution to the therapeutic means already at hand. The radioactive baths and gaseous springs are in the foreground (Glaessgen,[28] Kemen,[22] Aschoff[44]), but also places with inhalation (His,[4 33] Gudzent[3 211]) and facilities for drinking radioactive water (Benczur,[57] Joachimsthal, Kreuznach, etc.) have to be considered. The treatment in these establishments is more satisfactory than that given at home, as it removes the patient from his accustomed surroundings, in which he is always sure to lapse into his old habits. Radioactive solutions by mouth and injections have been successfully employed in cases of muscular rheumatism (Benczur[57]), in sacral pains resulting from menopause in neuralgias: trigeminus, alcoholic neuritis (Hovorka and Konfeld,[250] Neusser,[251] Gottlieb,[250] Armstrong,[50] Benczur,[57] Fuerstenberg[47]). In sciatica some cases are improved (Benczur,[57] Fuerstenberg,[47] Christides, Salzman, Schweitzer,[205] Simonson,[225] Prich[227]), not all. Results were negative in lumbago, multiple sclerosis, occipital neuralgia. In tabes and tabetic crises injections of radioactive solutions have been favorably reported (Benczur,[57 212] Schücking,[52] Freund[213]). Sometimes small doses (1/100 gr.) of radium salts, in other cases larger doses (1/10 mgr.), are necessary for the calming effect. In neuralgia the direct application of radioactive compresses have been recommended (Lazarus[19]), or the application of small bags containing radioactive salts for several hours (Buxbaum[62]) yielding favorable results in neuralgia of the fifth nerve, of the intercostal nerve and in sciatica. In similar instances thorium X has been used subcutaneously and by stomach. Favorable results are reported in chronic articular rheumatism, polyarthritis, neuralgia, sciatica (v. Noorden and Falta[189]), in migraine, tabetic crises (Falta and Freund,[36] Strasser,[158] Benczur,[212] Gudzent,[34 60 90] Nagelschmidt,[86] Nenadovics,[39] Geoerges[216]). A definite conclusion as regards the therapeutic value of radioactivity cannot be reached from the observations so far made in their use in these diseases.

Insomnia, Neurasthenia, Hyperexcitability.

The favorable action upon such conditions was first observed in cases treated in the emanatories (Benczur,[57] v. Noorden,[69] Armstrong,[39] Fuerstenberg[47]). The effect of suggestion could be eliminated by the observation that larger doses of emanation were still more beneficial. Definite indications for such a treatment cannot yet be given. Also small quantities of thorium injected subcutaneously had a favorable effect upon insomnia; however, the patients were under other calming influences than those just mentioned.

Sexual Power.

At the beginning of radioactive treatment different investigators observed the stimulating action of radioactive treatment upon the germinative glands and upon the reflex apparatus, provided that these organs are still able to functionate (Falta, Freund,[36] etc.). In mild cases of diabetes, similar effects have been reported from van Noorden's clinic. In such instances it is essential that the patients are absolutely free from sugar before the treatment is started, as radioactive treatment seems to check the healing of the diabetic patient. Provided that the antidiabetic diet is still strictly observed, radioactive water is given, containing 30,000-60,000 M. U., or in the form of inhalation (50-80 M. U. per liter air), or eventually as combination of inhalation and emanation baths. Thorium X also exerts a stimulating action upon the same organs. In treatment the greatest precaution is necessary, as an overdose would easily become harmful. In women the treatment by emanation caused a return of menstruation after menopause had already set in. Hemorrhage became very profuse in cases where previously they had been very weak. Such effects can occur even with very small doses, and therefore the greatest care has to be observed in women inclined to pronounced menorrhagia. Thorium X is considered a powerful emmenagogue.

Effect Upon the Gastrointestinal Tract.

Radioactive treatment may favorably influence neuroses of the stomach and of the intestines; constipation may be relieved as well (Benczur,[57] Armstrong[59]).

Contraindications for Radioactive Treatment.

Although a complete review of all the indications to radioactive treatment cannot be given at the present time, certain contraindications can be deduced from the great number of empiric and theoretical facts gathered. The list may still be changed.

Radioactive treatment is not advisable in (1) weak heart, especially with low blood pressure; (2) in neuroses of the vegetative nervous system, in cases of severe neurasthenia, vagotonia; (3) in wasting diseases, in Graves' disease (Falta), severe diabetes (v. Noorden[69]), in febrile conditions; (4) tendency to hemorrhages, as menorphagia, metrorrhagia, hemorrhagic diathesis, in

hemolytic processes, in pregnancy (Benczur,[57] Falta,[14] Jansen,[5] Nenadovics,[29] Eichholz[26]), ulcus ventriculi, in hemorrhagic nephritis (Nagelschmidt[259]); (5) far-advanced stages of blood diseases, affecting particularly the erythrocytic and leucoplastic system (not in early stages of the disease, which are particularly favorable for radioactive treatment); (6) otitis media (Benczur[57]), iritis (Benczur); (7) cachexia of any kind (very unfavorable influence being observed in carcinomatous cachexia), and (8) senile marasmus (not in cases of beginning symptoms of senility, where radioactive treatment acts favorably).

VALUE OF THE METHODS OF RADIOACTIVE TREATMENT.

Just as the indications for radioactive treatment cannot yet be definitely outlined, the same precaution is indicated for the different methods of treatment. A classification according to the intensity of effect obtained can be attempted, however.

(1) Thorium X by injections is the finest remedy, allowing a varied gradation from smallest doses up to largest doses, which even may endanger life. The effects are so manifold, partly very violent. The quantitative relationship between dose and effect has yet not been sufficiently studied, so that this treatment cannot yet be recommended for general use. In drinking thorium X water the same precaution is necessary, but it seems likely that these substances administered in such a way probably are not inferior to the injections (Bickel[70]). An undesirable effect, the irritation of the gastrointestinal tract (Gudzent,[78] Nagelschmidt,[55] Czerny and Caan,[153] etc.), has to be remembered, which action, by careful dosage, can be avoided. So far as can be said, the thorium X treatment has a great future before all other methods, provided we learn more about its actions (two fatal cases, Orth,[89] Gudzent[90]). With proper care this substance may even be used for the treatment at home. Particularly in cases where considerable amounts of radioactive energy has to be applied in a concentrated form it will be indicated. For instance, in cases of leukemia (with the exclusion of pernicious anemia); also in cases of gout, in chronic torpid arthritis and arthritis deformans, neuralgia, myalgia; perhaps, also, it may become advisable in sexual impotency.

Theoretically, injections of radium do not differ greatly from thorium. However, a medium dose of thorium will exert a good action, and will not be so expensive as radium. The injections of radium salts used at the present time are generally too weak. Large doses of radium are most successful in severe cases of anemia. The stimulating dose of radium, acting upon the bone marrow, remains far below the hemolytic dose. The influence upon the leucocytic system is not so evident nor so dangerous as with thorium X. In the latter substance the margin between the therapeutic and the toxic dose is very small. Radium emanation in serious anemias, even very large doses, has not the same effect as when radium salts are injected. Injections with radium salts

are indicated in severe cases of chronic articular rheumatism still complicated with fresh exacerbations. However, this is a very expensive treatment.

Combination treatment of strong radioactive springs with emanatorium and drink cure (Plesch, Fuerstenberg, His, Glaessgen, etc.) seems to be the popular treatment of the practitioner anxious to refer his patient to the safer and more certain radioactive treatment. For very susceptible and run-down patients it may be advisable to prescribe first the emanation treatment by inhalation and by drinking the water. Then, when the reaction has passed, the baths can be given (Laqueur and Loewenthal). Even small doses of emanation may already give good therapeutic results (Benedict[196]).

The most *important indications* are (a) genuine gout, provided that the patient during the whole treatment observes strict diet; (b) arthritis of non-gouty origin, provided these conditions have been unsuccessfully treated by rest, antirheumatic remedies, and where the patient has become discouraged; (c) myalgia and neuralgia, not caused by metabolic disturbances, radioactive treatment is indicated where physical and chemical treatment can be recommended; (d) impotency, not due to metabolic causes, radioactive treatment, perhaps a small dose of thorium X, may be preferred to the emanation baths; (e) beginning symptoms of old age, without morbid manifestations. Gastein, long before our knowledge of radium, was found a rejuvenating spring, and also patients returning from Joachimsthal praise the stimulating qualities of the treatment received there. Injections of small doses of radium and thorium daily (100-2000 M. U.), continued for several weeks, seem to have a stimulating influence upon elderly people. A definite opinion upon this subject cannot as yet be given at present, as the many factors which may have a share in this effect must be considered; (f) light forms of neurasthenia, nervous insomnia, nervous pruritus.

Strong emanatories come only at this place, even if they contain at least 25 M. U. in the liter, as well as these waters, which admit a further increase of their radioactive strength. Such institutions, however, are still very expensive; they are substituted by the movable apparatus, which still need greater perfection until great results can be expected. The emanation bed of Neulengfeld can be quoted in this instance. The emanatorias of medium strength (12-25 M. U.) and the drinking cures with water, containing high amounts of emanation (30,000-60,000 M. U. per die). If only local reactions are desired, the highly standardized radioactive cushions and compresses may be mentioned, and least of all the weak emanatorias, with 8-12 M. U. This form of treatment has been recommended and used most frequently in cities, water resorts and sanitariums long before the physiological and pharmacodynamic properties of these weak gaseous mixtures has been sufficiently studied. Not only a great

amount of money has been wasted by the lack of discrimination in choosing this method and too weak doses for having any therapeutic effect whatsoever. Doubtless radioactive treatment has its value, but in the future it will be necessary to watch the further development of this treatment without too much enthusiasm, but without a nihilism which opposes any new method of treatment (Lazarus,[190 191] Kisch,[192 210] Weisz,[193] Hirsch,[194] Fuerstenberg,[194] etc.). After more careful studies (physiological, pharmacological and clinical) we must gradually reach a better understanding of the problem involved. Until this period has been reached radioactive treatment cannot yet be recommended for general use. The more is this true for the thorium treatment, which embodies great curative, but also dangerous, properties, which have to be fully considered.

[In the following list only the most important papers have been consulted, and so far as obtainable through the kindness of the librarian of the Surg. Medic. Library at Washington, D. C., which courtesies I wish to acknowledge especially. The literature on radium and radiotherapy during the last 10 years exceeds 700 articles.]

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807 St. Paul Street, November, 1913.

Book Reviews.

A Text-Book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D., Professor of Medicine and Clinical Medicine at the Medico-Chirurgical College; Physician to the Medico-Chirurgical Hospital; Consulting Physician to the Jewish Hospital and to the Widener Home for Crippled Children; formerly Physician to the Philadelphia and to the Protestant Episcopal Hospitals, Philadelphia; Officier de l'Instruction Publique. Illustrated. Eleventh Edition,, Thoroughly Revised. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company, 1913. Cloth, $5.50 net. Half Morocco, $7 net.

Anders' Practice of Medicine is so well and so favorably known that it seems useless to expatiate upon its virtues. Like Osler's Practice, it is a classic, and with the present revision should retain its erstwhile popularity with practitioner and student alike. It is indeed unnecessary to recall the many virtues of the previous editions of this book, for they are too well known by our readers. However, since the appearance of the last edition there have been quite a few changes in medical thought, and to render the book of the greatest value to the greatest number it became necessary to recast a considerable portion of the book. Among the many additions may be mentioned McPhedran's sign of peritonitis in typhoid fever, Burke's reflex sign in typhoid fever, hot air inhalations in diphtheria, Weil's test in syphilis, Pastia's sign of scarlet fever, Karell milk-cure in vavular heart disease, Boas' method of testing motor function of stomach, Falk and Salomon's reaction in gastric cancer, chloride retention theory of renal dropsy, Towns-Lambert method of treating morphinism, etc. Besides these additions the author has added sections on diseases of the parathyroid glands, streptococcus tonsillitis, anti-typhoid vaccination, pellagra, Lane's kink of the ileum, etc. Therefore we state without hesitation that the present edition of Anders' Practice will more fully than ever meet the most critical demands of the profession, as in both diagnosis and treatment the author is conservative in tone and amply explicit.

Diagnosis of the Malignant Tumors of the Abdominal Viscera. By Prof. Rudolph Schmidt, Professor of Medicine in the University of Innsbruck. Authorized English version. By Joseph Burke, Sc.D., M.D., Attending Surgeon, Buffalo Hospital of the Sisters of Charity; Consulting Surgeon, Emergency Hospital, Buffalo, N. Y. New York: Rebman Company. Cloth, $4 net. 1913.

Malignant disease is so on the increase that any information which will help us in recognizing the distempter before it has advanced beyond help serves a very useful purpose. This is espe-

cially true of abdominal cancer, as it is deep-seated, difficult of access for diagnostic purposes, and as a consequence apt to be discovered only after far developed. The family physician will especially derive much benefit from a close study of this book, as it is he who is first called in to see these cases. Therefore, it is up to him to be fully prepared to make the proper diagnosis and to refer the patient to the surgeon before it is too late to institute radical measures. The book at every opportunity impresses upon the reader the importance of early recognition of abdominal malignancy, and thoroughly and scientifically outlines the plan by which the author has derived most success in diagnosticating abdominal disorders.

The volume consists of two parts, the first of which is devoted to a general discussion, such as physical examination of the abdomen, chemical demonstration of blood in the feces, the diagnostic significance of vegetable and bacterial organisms of the gastro-intestinal tract, Ehrlich's diazo reaction, prophylaxis of malignant tumors, etc., and the second, which takes up in detail cancer of the stomach, early symptoms, associated symptoms in other organs, feces and stomach contents, types of disease, course and duration, differential diagnosis, carcinoma of the large intestine, of the liver, gall-bladder, pancreas, kidney. Included are also a number of case histories illustrating the text.

Nobody is in a position through abundance of material to better write upon the above subject. In fact, Dr. Schmidt's opportunities for study along these lines have indeed been rare, as a result of which he has made a book of the greatest merit.

Materia Medica, Pharmacology, Therapeutics, Prescription Writing. For Students and Practitioners. By Walter A. Bastedo, Ph.G., M.D., Associate in Pharmacology and Therapeutics at Columbia University; Assistant Attending Physican to St. Luke's Hospital, New York City; Consulting Gastro-Enterologist to the Smith's Infirmary and to the Red Cross Hospital; Consulting Physician to St. Vincent's Hospital, Staten Island; Fifth Vice-President of the National Convention for the Revision of the United States Pharmacopeia; formerly Curator of the New York Botanical Garden. Illustrated. Philadelphia and London: W. B. Saunders Company. Baltimore: The Medical Standard Book Company. Cloth, $1.00. 1913.

One would say hastily that enough and sufficiently good materia medicas are already on the market. Rashly and without thoroughly inspecting the present presentation the same opinion would prevail, but with a thorough study of the manner and method in

which the author presents his subject soon awakens one to a realization that he is dealing with a book somewhat out of the ordinary. Today too little attention is being given by the physician to the possibilities of the employment of drugs in the combating of disease. Such a treatise as the one before us should go a long way in dissipating this indifference of the profession, as the author by experimentation upon animals and observation upon the sick attempts to demonstrate the actions of the various agents described in the book. Everywhere one is impressed with the great reliance he places upon laboratory investigations in the study of drugs. Here as elsewhere in medicine research is coming into its own, and drugs which were formerly supposed to be of great merit have by these measures been found wanting, and vice versa. The book is admirably adapted to student purposes or the needs of the general practitioner. It gives us great pleasure to put our stamp of approbation upon the book, and we heartily commend it to the consideration of the profession.

The Pathogenesis of Salvarsan Fatalities. By Sanitaets-Rat Dr. Wilhelm Wechselmann, Directing Physician of the Dermatological Department, Rudolph Virchow Hospital in Berlin. Authorized Translation by Clarence Martin, M.D., First Lieutenant M. R. C., U. S. A.; late Clinical Assistant, St. Peter's Hospital for Stone and Other Urinary Diseases, London; Member Association Military Surgeons, Berlin Urological Society, etc. St. Louis, Mo.: The Fleming-Smith Company. 1914. Cloth, $1.50 net.

As Dr. Wechselmann has the largest experience of any man in the world with salvarsan medication, his conclusions are worthy of the most serious consideration. Here one will also find his investigations concerning the underlying factors present in fatal cases. Dr. Wechselmann plainly states that the intravenous injection of salvarsan is not free from marked dangers. He further says in fatal cases one is not justified in concluding that death was due to the salvarsan or even its cumulative action, but to something inherent in the patient, for millions of doses have been injected without any signs of salvarsan poisoning. Though some authorities believe that death is an expression of arsenical poisoning, Wechselmann cannot after a full investigation bring himself to that belief. He, on the other hand, thinks it due to some interference with kidney function, something akin to uremia. As an earnest of this belief the author cites numerous experiments performed on healthy rabbits. He is therefore firmly convinced that accidents are incident to interference with renal function. He further states: From the literature of reported cases of deaths one can see that such fatalities form a variegated group without

showing a distinct type. In only the smallest number of these can death be attributed directly to salvarsan. The marked differences in the clinical pictures of fatal cases, among which encephalitis hemorrhagica is a frequent type, show that salvarsan, in so far as the greater number of cases are concerned, is but an indeterminate factor and not a distinct cause of death. Thus no uniform explanation fitting all cases can be given. A glance at the report of fatalities is sufficient to show how recklessly salvarsan was employed at first, and it is certain that many fatalities could have been avoided. He then gives the precautions necessary to its use, namely:

1. The most exact technic.
2. A dose of the drug carefully adapted to the individual case.
3. Careful observation of the urinary secretion when employing salvarsan; resorting to the most exact chemical and microscopical examination of the urine. This holds good, particularly when the combined treatment is employed.
4. The conjoint use of salvarsan with heavy mercurial treatment is dangerous. If one will use the combined treatment, then give mercury very carefully many days after the last salvarsan injection, but never reverse this rule.
5. Take into careful consideration every general reaction or rise of temperature, following the use of salvarsan, and make a full investigation of the causes of such effect.

The Diseases of Children. By Henry Enos Tuley, M.D., late Professor of Obstetrics, University of Louisville, Medical Department; Visiting Physician, Masonic Widows and Orphans' Home, Louisville, Ky.; Secretary of the Mississippi Valley Medical Association; Ex-Secretary and Ex-Chairman of the Section on Diseases of Children, American Medical Association; Ex-President American Association Medical Milk Commission, etc. With One Hundred and Six Engravings and Three Colored Plates. Second Revised Edition. St. Louis: C. V. Mosby Company. 1913. Cloth, $5.50 net.

The second edition of Tuley's Diseases of Children will be found by the general practitioner to cater to his taste. It is well written and covers the field thoroughly but not overly so. Whilst it has many good features, that which will appeal to the reader most is the fullness with which it elucidates treatment. Wherever one opens the pages one will be struck with the practical tone of the contents. The illustrations are numerous, well selected and apparently chosen for their usefulness in elucidating the text. The frontispiece is a colored plate showing Koplik's spots. Both students and practitioners will find it an invaluable aid in their work.

MARYLAND MEDICAL JOURNAL

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BALTIMORE, JUNE, 1914

ORAL SEPSIS AS A GATEWAY OF CRYPTOGENIC INFECTION.

ONLY recently, and as yet not too generally, oral sepsis of one character or another has come to be recognized by the profession as a possible nidus of infection of an obscure nature. When one stops to think of the many general ravages set up by diseased conditions of the mouth, one stops to wonder why the profession has been so tardy in bestowing a proper amount of attention to disorders of the oral cavity. In medical schools practically no instruction is given to diseases of the mouth, therefore the student graduates without a proper amount of respect for these disorders, looking upon them as of minor importance and of no great amount of consequence. This apathy should be corrected and no doubt will when the profession is brought to realize the number of lesions of obscure nature which may take their origin from septic conditions seated in the mouth. An article by William H. Haskin in the May number of the New York *Medical Journal* should go a long way in educating the profession concerning the many cryptogenic lesions which are due to infection originating in the alveolar process. He states that the dental profession is now thoroughly alive to this evil and making every effort to educate the public, medical and dental professions as to the possible ill effects upon the body by neglecting infections of the jaw. However, the blame for the present state of oral sepsis must be largely placed upon the medical profession because of its inexcusable ignorance as to existing conditions through lack of definite knowledge of the teeth. This is not surprising when we realize

that doctors themselves are most negligent of their mouths. Purulent diseases of the jaws always attack first the membrane lining the teeth sockets, and must start either at the gum margin or at the apex of the root. When it occurs at the apex we get apical abscess, commonly called gum-boil. Everyone knows the great distress caused by abscess here and of the relief incident to its lancing. But how many realize the pathological destruction that occurs? Every apical abscess causes destruction of the alveolus around the apex and almost invariably a perforation of either the lingual or labial plate of bone. This is nothing more or less than an osteomyelitis, and as such is attended with more or less general toxemia from the bacterial poisons generated. After the acute condition subsides the patient believes he is cured. Such usually is the case, but not always, as sometimes very serious conditions follow as the result of toxic absorption from a chronic abscess left as a relic. There is no doubt that many of these acute conditions, when properly handled, heal and leave no sepsis of the jaw. Unfortunately, healing does not always occur, notwithstanding the subsidence of pain, and the patient considers himself cured. Careful examination of the mucous membrane over the apex will often reveal minute fistulous openings through either lingual or labial plate which lead to carious cavities. According to the writer of the above article, fistulous apical abscesses are very common, and will often account for offensive breath, if nothing worse, to say the least a most mortifying affliction. Infection arising in the margin of the gum, constituting pyorrhea alveolaris, or Riggs' disease, is also a most frequent precursor of constitutional disorders of cryptogenic origin. Consequently, in maladies of obscure nature, especially those which are dependent upon infective processes, thoroughly examine the gums. Infection here can always be found without difficulty if looked for. It begins with a reddening of the margin of the gum, which soon becomes tender and bleeds easily. If not arrested this inflammation spreads up along the roots of the teeth and forms pus sockets, and finally attacks the alveolus itself. If one stops to think that such systemic diseases as rheumatoid arthritis, endocarditis, gastric ulcer, have been definitely proven sequelae of infected jaws, it is time that we take this subject seriously and bestow upon the teeth and jaws enough time to enable us to recognize alveolitis as readily as bone infection elsewhere.

Medical Items.

The sixteenth annual meeting of the American Proctologic Society will be held at Atlantic City, N. J., June 22 and 23, 1914.

Dr. A. Trego Shertzer, who has been seriously ill at his home for the past two weeks, is improving.

One case of smallpox was discovered recently in Centreville.

By invitation of the trustees of Johns Hopkins Hospital, the April meeting of the Baltimore County Medical Association was held at the hospital at 2 o'clock Wednesday afternoon. There were demonstrations of cases by Prof. William S. Thayer and clinics by Dr. L. H. Watkins.

Passed Assistant Surgeon D. C. Walton, Lieutenant, U. S. N., Johns Hopkins Medical School, class of 1909, has been transferred from the Naval Hospital, New York, to the Naval Academy at Annapolis, Md.

Passed Assistant Surgeon Ralph Walker McDowell has been detached from the Naval Academy at Annapolis, Md., to await orders at Annapolis.

On April 13 a room in St. Luke's Hospital was dedicated with appropriate ceremonies to Dr. Philip B. Towler.

Dr. Theodore C. Janeway, now Bard professor of medicine in Columbia University and director of the medical department of the Presbyterian Hospital of New York, has been appointed professor of medicine in Johns Hopkins University, succeeding Dr. Lewellys F. Barker, who, however, will retain his connection with the university in an important capacity. The appointment will take effect at the close of the present academic year. The school is most fortunate in securing the services of so distinguished a clinical teacher, investigator and physician.

Dr. J. H. Mason Knox has been appointed a member of the Board of State Aid and Charities.

Dr. Hugh Hampton Young has been reappointed a member of the Lunacy Commission.

Dr. Albert T. Chambers has been reappointed by the Mayor a member of the School Board of Baltimore city.

Dr. William H. Scruggs, Jr., of the staff of the State Sanatorium, Sabillasville, has declined the position of second assistant physician to the Massachusetts State Hospital for Tuberculosis at Lakeville, Mass.

Dr. Hampson H. Biedler of 119 W. Saratoga street has been seriously ill with ptomaine poisoning.

Dr. Richard H. Follis, Johns Hopkins Medical School, class of 1899, and Mrs. Follis, of 3 E. Read street, have leased for the summer a cottage in the Green Spring Valley, which they will occupy early in June.

The annual commencement exercises of the Nurses' Training School of the Church Home and Infirmary were held in the rotunda of the infirmary May 14. There were 15 graduates. The diplomas were delivered by Bishop John Gardner Murray. The principal address was made by Dr. Guy L. Hunner. The graduates were Misses Margaret Harbough, Eva Hartman, Sara Sutherland, Florence Stem, Elizabeth Minnick, Beatrice Blair, Ellen Schaeffer, Nettie Palagano, Virginia Wedderburn and Mary Davenport, all of Baltimore; Sara Claggett, Annapolis; Grace Robosson, Cumberland; Nina Hooper of Hoopers Island, Md.; Millie Shull and Anna Miller of Washington.

The annual banquet given to the graduating class by the Alumnae Association was held at the Hotel Rennert the following evening, May 15.

Dr. Winford H. Smith, superintendent of Johns Hopkins Hospital, who for the past two months has been supervising the planning of the million-dollar hospital for the University of California, has returned to Baltimore.

Dr. Smith's selection as consultor for the hospital was a distinct tribute to his ability as an organizer, as it was a tacit asknowledgment that he was one of the country's leading hospital heads. His executive capacity is shown in the excellent management of Johns Hopkins Hospital.

He awarded the diplomas to the graduates of the Nurses' Training School, May 20.

Dr. Hiram Woods has been appointed a member of the Board of State Aid and Charities.

Dr. S. K. Owens of Montgomery, W. Va., who has been taking a post-graduate course in diseases of the eye, ear, throat and nose at the Philadelphia Polyclinic and College for Graduates in Medicine, has been visiting his mother, Mrs. John S. Owens, 11 East Lafayette avenue, Baltimore. Dr. Owens is a graduate

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of the College of Physicians and Surgeons, Baltimore.

Dr. Henry Barton Jacobs was elected secretary of the National Association for the Study and Prevention of Tuberculosis at the annual meeting of the association, held in Washington, D. C.

Bids have been asked of several large contracting firms for the construction of the new maternity building of the Hebrew Hospital. It is expected that the work will be started right away, and that the building will be ready for use within six months.

The cost of the building complete has been donated by Abraham Mendels, and is estimated to approach $50,000. Between 20 and 25 beds will be provided for the mothers, and everyone will be in a separate room. Every phase of modern obstetrical work will be provided for with the latest efficient devices and methods, and there will be in addition an up-to-date X-ray laboratory.

The two weeks' campaign to raise $320,000 for Mercy Hospital closed with contributions aggregating $120,948.96. Pledges for assistance within the year have been given members of the committee, and their plans will no doubt be fully carried out within a year or two.

Dr. and Mrs. Alexander D. McConachie will spend the summer traveling in Europe. They will sail from New York July 8 on the steamship Mauretania.

BIRTHS.

To Albert M. D. McCormick, M.D., University of Maryland Medical School, class of 1888, Medical Inspector, Commander, U. S. N., and Mrs. McCormick, of 8 Sampson Row, U. S. Naval Academy, Annapolis, Md., March 25, 1914, a daughter.

Recently to Frederick H. Vinup, M.D., University of Maryland Medical School, class of 1909, and Mrs. Vinup, of 1221 Hollins street, Baltimore, a daughter.

To J. Albert Chatard, M.D., Johns Hopkins Medical School, class of 1903, and Mrs. Chatard, of 40 W. Biddle street, April 18, 1914, a son—Ferdinand E. Chatard.

MARRIAGES.

S. Ernest Enfield, M.D., Physicians and Surgeons, 1913, of Baltimore, Md., to Miss Lelia May Scarborough of Havre de Grace, Md., at Havre de Grace, May 9, 1914. Dr. Enfield is connected with the Mercy Hospital.

Dewitt Bellinger Casler, M.D., Johns Hopkins Medical School, 1904, formerly of Little Falls, N. Y., now of Baltimore, to Miss Carolyn Brooks Johnston of Baltimore, at Baltimore, April 30, 1914. After a wedding trip spent in Bermuda, Dr. and Mrs. Casler will reside in Baltimore, where the groom is practicing his profession.

Humphrey W. Butler, M.D., University of Maryland Medical School, 1913, of Brazil, South America, to Miss Mildred Bartownia Baker of Fredericksburg, Va., at Fredericksburg, April 23, 1914.

Clifford T. Sappington, M.D., University of Maryland Medical School, 1903, to Miss Kate Eloise Kelly, both of Frederick, Md., at Frederick, April 13, 1914.

DEATHS.

Richard Alexander Urquhart, M.D., instructor in pediatrics at the Johns Hopkins Medical School, died suddenly of heart failure at his home, 48 W. Biddle street, April 22, 1914, aged 42 years.

Dr. Urquhart was prominent in medical circles in this city. He was assistant pediatrician at the Johns Hopkins Dispensary, attendant physician to the Union Protestant Infirmary, the Church Home and Infirmary, the Baltimore Orphan Asylum and the James Lawrence Kernan Hospital and Industrial School for Crippled Children. He was one of the medical inspectors of the public schools.

Richard Pinkney Blackistone, M.D., University of Maryland Medical School, 1849, of River Springs, Md., died at his home May 12, 1914, aged 91 years.

Morris R. Bowie, M.D., University of Maryland Medical School, 1908, of Somerset, Col., died at his home in October, 1913, aged 27 years.

Charles L. Randell, M.D., College of Physicians and Surgeons, 1889, of Portland, Md., a member of the South Atlantic Medical Association, died at his home in Marion, S. C., recently from pneumonia, aged 53 years.

John Thomas Shepherd, Acting Assistant Surgeon, U. S. P. H. and M. H. Service, University of Maryland Medical School, 1874, died at his home in Chattanooga, Tenn., March 22, 1914, from heart disease, aged 64 years.

Fellows_Syrupus Hypophosphitum

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Abstracts.

FURTHER OBSERVATIONS ON SOME ANATOMIC AND CLINICAL RELATIONS OF THE SPHENOID SINUS TO THE CAVERNOUS SINUS AND THE THIRD, FOURTH, FIFTH, SIXTH AND VIDIAN NERVES.

Dr. Greenfield Sluder, St. Louis.

Paper read at the Thirty-fifth Annual Congress of American Laryngological Association, held May 5, 6 and 7, 1913, in Washington, D. C.

In a previous communication (last May), in which the question was raised as to the etiology and treatment of migrain, Sluder made the statement that he believed that many (but not all) of the recurrent headaches which bear the name of migrain are sphenoidal empyemata which have lost most, if not all, local signs, or which were started as such empyemata, and that the nerve trunks had become involved either by extension of the inflammation (or its toxin) through the thin wall separating the sphenoid sinus from the adjacent nerve trunks. The results obtained during the past year in a goodly number of cases strengthen his belief in the correctness of the deductions detailed in that report.

Sluder observed that the third, fourth and three divisions of the fifth, sixth and Vidian frequently lie in close association to the sphenoid sinus, a deduction drawn from specimens which he studied by cross sections. His findings, with the exception of the Vidian nerve, were corroborated by Ladislaus Onodi (*Archiv. fuer Laryngologie*, Bd. VI, Heft II, July 10, 1912). This author's method was to follow the nerve trunks in certain specimens, sometimes to remove the wall of the sphenoidal sinus, and then to study the relations of the nerve trunks thereby exposed. He found that they were in these close associations for varying distances, sometimes even as much as 20 mm.

He did not consider the cavernous sinus in these relationships. He pictures specimens where the sphenoid sinus extended so close to the clivus of Blumenbach as to make transparency of the separating bone, and shows how this brings the sixth into these associations. From an inspection of Dr. Warren B. Davis' 145 Caucasian specimens showing the nose and accessory sinuses from the eighth week of fetal life to the twenty-fifth year uninterrupted (several specimens for each year, except the eleventh year), Sluder observed that the sphenoid sinus spreads laterally at an early age, reaching to close proximity to the second division of the fifth as early as two and one-half years, and that this condition runs almost constant throughout the series. Its development (Davis) begins in the anterolateral aspect of the body, and slowly extends backward, spreading, however, rapidly laterally to approach the foramen rotundum, and then proceeding backward. As early as the sixth year the Vidian canal may be approached. Sluder considers that if he is right in the conclusion that the mode of production of these headaches—the pathologic sequence—is the close association of the sphenoid sinus to the nerve trunks, and that the inflammatory processes are transmitted through the thin bone separating the cavity of the sphenoid from the associated nerve trunks, then it is necessary that such anatomic associations be formed in early life as an explanation of such head-

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WEAKENED BY DISEASE
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aches beginning in early life. Another year of clinical observation strengthens Sluder's belief that the pathologic process underlying these cases is a hyperplastic sphenoiditis. From an observation of 100 cases he concludes that the second division of the fifth and Vidian are the nerves most frequently involved (95 per cent.). They may be involved singly, or together, then making the picture which would otherwise emanate from the sphenopalatine ganglion. It is difficult to differentiate this class of cases from sphenopalatine ganglion neuralgia; hence one should be carefully on guard. Since the previous communication three medicines have been tried for intrasphenoidal use: Iodid of potassium in water, 2 to 5 per cent., proved to possess nothing upon which its use may be recommended; it is apparently inert. One per cent. chlorotone in water proved to lack recommendations. The proprietary "cresatin" also failed to prove better adapted for these purposes than carbolic acid or oil of wintergreen. The medicines which have so far proved of greatest benefit are: One per cent. carbolic acid in oil; 2 to 10 per cent. oil of wintergreen and aqueous solutions of sodium salicylate, 2 to 5 per cent. These have been successful in allaying the pain long after the sinus was satisfactorily opened and the wound healed.

A FURTHER CONSIDERATION OF SIR CHARLES BALL'S OPERATION FOR INTERNAL HEMORRHOIDS.

By Alfred J. Zobel, M.D., San Francisco, Cal.

Read before American Practologic Society, June 16-17, 1913.

After a trial of this operation the author of the paper sums up his conclusions as to its value as follows: That, as a modification of the old ligature operation, it is better than the latter, and, at the same time, is far superior to the clamp and cautery operation, in that it takes care of and avoids the recurrence of that revoluted anal skin ring which generally becomes markedly edematous immediately after these operations, leaving behind skin tags after the swelling subsides.

In every instance in which the essentials of Ball's technique have been followed out carefully the author's results have been exceedingly satisfactory.

The operation is recommended.

DEDUCTIONS BASED ON AN ANALYSIS OF 3000 RECTAL CASES.

By T. Chittenden Hill, M.D., Boston, Mass.

Read before American Practologic Society, June 16-17, 1913.

The principal object of this tabulation of 3000 consecutive rectal cases was to furnish data as to the relative frequency of the various affections of the rectum and colon. There was a total of 1120 operations performed in this series, and some deductions of a practical nature were drawn from this experience. It was found that rectal ailments were more common among males than females, the ratio being three to two.

Hemorrhoids formed a large proportion—41 per cent. of the total. Next in frequency were abscesses and fistulae, 18 per cent., and the remaining disorders were tabulated as follows: Pruri-

A Temporary Diet for Infants in Summer Diarrhea

Mellin's Food
4 level tablespoonfuls

Water (boiled, then cooled)
16 fluidounces

Each ounce of this mixture has a food value of 6.2 calories—affording sufficient nourishment and in a form readily assimilable.

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tus ani, 8 per cent.; anal fissure, 10 per cent.; colitis, 6 per cent.; prolapsus ani and procidentia recti, 3.7 per cent.; cancer of the rectum and sigmoid, 2 per cent.; benign growths, 1.5 per cent.; stricture, 1.5 per cent.; syphilis, 2 per cent.; constipation, 2.8 per cent.

Other miscellaneous conditions were recorded which made up but a fraction of 1 per cent., such as anal verrucca, congenital stenosis, patulous anus, pilo-nidal sinus, furuncles, foreign body, incontinence, coccygodynia, trauma, sigmoid diverticulitis, etc.

Editorial Comment.

ANTI-TYPHOID VACCINATION.

Southern California Practitioner.

An interesting brochure on this subject has been issued by our Federal Government under the caption, "Anti-Typhoid Vaccination in the Army and in Civil Life," prepared by Major F. F. Russell, M.D., of the Medical Corps, United States Army. A copy of this document was sent to the *Southern California Practitioner* by our Congressman, the Honorable W. D. Stephens.

Since the results of the campaign in the army against typhoid fever in Texas have become generally known, there has developed among the medical profession and the laity an active interest in typhoid prophylaxis by means of bacterial vaccines. Typhoid fever is the most common of the continued fevers, and prevails practically throughout the world. Imperfect sewerage, contaminated water supply, and contaminated milk supply are the most important ways in which it is distributed, although a large number of cases are spread by fingers, food and flies, either from the sick or from well persons who contain the typhoid bacillus in their intestines or urine, who are known as carriers.

Vaccination against typhoid fever has been employed in the British Army in India for a number of years, with considerable success, but for several reasons, one of which was the fact that the vaccine used was not as satisfactory as the improved vaccine now being prepared, it had not given entire satisfaction when administered to the troops sent to South Africa during the Boer War, and for some years its use was given up. Its administration was then begun again for British troops sent to India, but was entirely voluntary, and so was only accepted by a minority of the men. Its use in the United States Army began in 1909, also voluntarily, but it was not administered on a sufficient scale to influence the typhoid fever rate until the mobilization of the maneuver division in Texas in the spring of 1911, when it was administered to all officers and men. The anti-typhoid vaccine is prepared in the laboratory of the Army Medical School, at Washington, both for the Army and Navy, and to a considerable extent for other administrative departments of the Government. The result of the improvements in the technique of its preparation in this laboratory has been to increase its efficiency and to reduce the severity of the local and constitutional reaction of its administration.

The immunity established by these injections is not absolute. Thus, in 1911, among 80,000 persons vaccinated in the Army, there were 11 cases of typhoid with one death (due to intestinal hemorrhage) among the vaccinated; and in 1910, six cases among

The Sanitary Home

Our new pamphlet, "The Sanitary Home," contains many valuable hints for the nurse or housewife regarding necessary precautions in sickness and for the home.

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the vaccinated with no fatalities. Had it not been for the prophylactic immunization there would have occurred, at prevailing rates of incidence, about 250 cases for the entire army. The fact that the immunity is not absolute is no objection to its use, but is rather an argument for its repetition at intervals, to be determined in the future as the lessons of experience become clear, just as we now do in the case of smallpox. It is the practice at present to revaccinate against both smallpox and typhoid at the beginning of each three-year period of enlistment. The failure to secure absolute protection in these few cases may be due to inefficiency of the vaccine, to exposure of the patient to exceptionally large quantities of infectious material, or inability of the individual to respond to immunization with the usual anti-bodies, a failure that can best be interpreted as a personal idiosyncrasy. With the limited number of doses of vaccine now used, we can never hope to raise the immunity high enough to protect against overwhelming doses of infectious material, and there are, no doubt, certain persons who cannot be perfectly protected against typhoid any more than against smallpox. We know that certain horses cannot be properly used for the production of antitoxin, and not all laboratory animals respond equally to immunization. However, in anti-typhoid vaccination we have a method for the prevention of disease that approaches in efficiency, if it does not equal, the protection against smallpox by vaccinia.

As to the feasibility of general inoculation. It is generally admitted by the opponents and more numerous lukewarm adherents of anti-typhoid vaccination that it is essential for the army and the militia of the several States in times of war and mobilization. Has it not, however, a field of usefulness in civil life in this country? It has been repeatedly shown that the incidence of typhoid fever is higher in hospitals than in the cities in which the hospitals are situated, and there is pretty general agreement that the medical and nursing staffs and employes should be vaccinated. For this same reason all who in any way come in contact with the sick should be immunized, since typhoid, like other exanthems, is contagious during the prodromal stage. In this group we may place the personnel of dispensaries, various charities and undertakers. Another large group comprises those who live in industrial villages, mining towns and isolated communities where the typhoid death rate is above the average. Workhouses, asylums, and especially schools, come in this category.

There is another large group of persons living under conditions simulating those occurring with an army in the field, although without the same sanitary safeguards. I refer to the camps of engineers, contractors and pleasure-seekers. Here, if anywhere, the use of the typhoid prophylactic would richly repay the time and trouble necessary for its administration. Its usefulness, however, is not limited to these classes of persons. The typhoid death rates for New York, Boston, Chicago and most other large cities in the North are low, varying from 4.7 in Bridgeport, Conn., to 17.5 in Philadelphia, and as long as the inhabitants of these cities remain at home they run little danger of contracting the disease. Remaining at home, however, is a thing most of us do not do; we send out patients, families, and go ourselves to the seaside and mountains, where the typhoid rate is five and ten times as

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high as at home. In the cities we depend on pure water, proper disposal of wastes, and the intelligent activities of an energetic municipal health department. In going into the country or traveling from place to place where the usual safeguards are lacking, why not avail ourselves of this form of individual prophylaxis which is efficient in all places and at all times?

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Memphis Commercial Appeal.

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The other day, at a banquet, one of the older physicians, a man whose hair had whitened in the service of suffering humanity, was asked his definition of a doctor, and, lifting his glass to the toast, he said: "A doctor is the man who prolongs life and makes death easy."

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